Amendment and Response Under 37 C.F.R. 1.116
Applicant: Josef Böck et al.
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Title: BIPOLAR TRANSISTOR

IN THE CLAIMS

Please cancel claims 25-26.

Please add claim 33.

Please amend claims 9, 24 and 27 as follows:

1-8 (Cancelled)

9. (Previously Presented) A bipolar transistor comprising:

an emitter area which can be contacted electrically via an emitter electrode;

a base area which can be contacted electrically via a base electrode;

a collector area which can be contacted electrically via a collector electrode; and

wherein at least one electrode of the emitter electrode, base electrode and collector electrode is a polysilicon layer, into which doping is inserted and impurity atoms are inserted, wherein the inserting of the impurity atoms causes a high density of vacancies in the polysilicon layer, the density in the range of about 10^{19} to 10^{21} cm^{-3}, ~~and~~ wherein the impurity atoms are C, P or Ar atoms and wherein the combination of the inserted doping and inserted impurity atoms is such that the electrode resistance is reduced.

10.-11. (Cancelled)

12. (Previously Presented) The transistor of claim 9, comprising wherein the polysilicon layer is doped with boron atoms.

13. (Previously Presented) The transistor of claim 12, comprising wherein the concentration of the boron atoms is greater than 5×10^{20} cm^{-3}.

14. (Previously Presented) The transistor of claim 9, comprising wherein the at least one electrode consists of polycrystalline silicon-germanium.

15. (Previously Presented) The transistor of claim 9, comprising wherein the at least one electrode is the base electrode.

16. (Previously Presented) The transistor of claim 9, comprising wherein the bipolar transistor is a self-aligned bipolar transistor.

17.-23 (Cancelled)

24. (Previously Presented) A bipolar transistor comprising:

an emitter area which can be contacted electrically via an emitter electrode;

a base area which can be contacted electrically via a base electrode;

a collector area which can be contacted electrically via a collector electrode; and

wherein at least one electrode of the emitter electrode, base electrode and collector electrode is a polysilicon layer doped with boron atoms, into which impurity atoms, which cause a high density of vacancies in the polysilicon layer, are inserted, wherein the impurity atoms are C, P or Ar atoms;

~~, and~~ wherein the density of the impurity atoms in the polysilicon layer is in the range of about 10^{19} to 10^{21} cm^{-3}; and

wherein the concentration of the boron atoms is greater than 5×10^{20} cm^{-3}.

25. (Cancelled)

26. (Cancelled)

27. (Previously Presented) The transistor of claim ~~26~~24, comprising wherein the at least one electrode consists of polycrystalline silicon-germanium.

28. (Previously Presented) The transistor of claim 27, comprising wherein the at least one electrode is the base electrode.

29. (Previously Presented) The transistor of claim 28, comprising wherein the bipolar transistor is a self-aligned bipolar transistor.

30.-32 (Cancelled)

33. (New) A bipolar transistor comprising:

an emitter area which can be contacted electrically via an emitter electrode;

a base area which can be contacted electrically via a base electrode;

a collector area which can be contacted electrically via a collector electrode;

wherein a polysilicon layer is used as the base electrode;

wherein the extrinsic base resistance of the base electrode is reduced by inserting impurity C atoms into the polysilicon layer, thereby causes a high density of vacancies in the polysilicon layer; and

wherein doping is inserted in the polysilicon layer.